G.M. 1908

220 of 08

Sh. No. 1-19

Application for leave to file Specification in respect of an Invention for Typographical Composing Machine

Invention Regn
No 15 of 1908-09

Previous references.

File No. 270-C of 1908-09

1909

Serial Nos. 1-19

(Gen. Mis.)

Later references.

GENERAL AND REVENUE SECRETARIAT.

Serial Nos. 1-19

Part B. for December 09

SUBJECT.

Application for leave to file Specification in respect of an invention for "Typographical composing Machines"

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1. From Messrs. Remfry and son, Calcutta. Letter dt 9.3.09
   Forwards application of Linotype & Machinery Ltd, London for leave to file the above specification.

2. To the Officer in charge of the State Huzur Treasury No. G.5312 dt 15/3/09
   Forwards for credit into the Treasury the sum of Rs. 10/- received with the above.

   To the Supdt of Stamps No. G. 5323 dt 17.3.09.
   Forwards for being stamped the power of attorney and the deed of assignment with a Stamp fee of Rs. nil

4. To the Supdt Govt Press. No. G. 5324 dt 17.3.09.
   Forwards for ~~verification~~ enquiry and report a copy of the specification of the invention

5.

G. R. S. 58

5. From the Officer in charge of the State Hazur Treasury No. 302 of 20.3.09. Acknowledges receipt of fs. 10 sent with Sl. 2 above.

6 From the Supdt of Stamps No. 195 of 20.3.09 Returns duly stamped the deed of assignment the power of Attorney sent with Sl. 3.

7. From the Supdt Govt Press. No. 812 of 20.3.09 Regrets with reference to Sl 4 that the application of Mr. Arthur Humford Pollen on the same subject may be sent to his office for reference.

8. To the Supdt Govt Press. No - G. 5683 of 2-4-09 Forwards as requested in the above the application of Arthur Humford Pollen.

9. From ——— No. 875 of 10-4-09. In reply to Sl. 4 above states that he is of the same opinion as given in his letter No. 917 of 24-4-08 —

10. To the Linotype and machinery Ltd No. G. 6852 of 2-6-09 — Grants them leave to file the specification of the invention.

11. To Messrs. Remfry and Son No. G. 6853 of 2-6-09. Forwards Copy of the above.

12. From Messrs. Remfry & Son Letter of 26-11-09 Forwards Rs. 30/-, 4 Copies of the specification and the P.O. granting leave to file the specification & requests that certain Clerical errors in the P.O. may be rectified & the Certificate at the bottom filled in & Signed.

13. To the Compiler, Mysore Gazette No - G. 3155 of 10-12-09 Notifies the filing of the specification received with the above.

14. To Messrs Remfry & Son. No. G. 3156 of 10-12-09. Forwards for Communication to the parties Concerned a Copy of the above & returns the order granting permission.

Inventions (1) Register No. 15 of 1908-09

G.R.S. 11] 1908-09

GENERAL AND REVENUE SECRETARIAT.

(Legal - Pats)

NOTES.

L. M. File No. 2702 of 09

FILE HEADING.

Application for leave to file Specification in respect of an invention for a Typographical Composing machine".

From

Messrs Kaufey and Son, Solicitors & Patent Agents, Calcutta

No. — Dated 9.3.09 Received 13-3-09

Diary No. 3874	Enclos. one file + 2 Deeds Spare Copies.	Serial No. 1

BRIEF ABSTRACT OF LETTER.

Forwards an application of Linotype and machinery Limited, Linotype and printing machinery manufacturers, of 188 & 189 Fleet Street London England, for leave to file a Specification in respect of an invention for "Improvements in Typographical Composing Machines".

NOTES AND ORDERS.

(1) With the above a deed of assignment and a power of attorney are received also Rs 12 towards the application & stamping fees.

The following drafts are submitted for approval

1) Obt to the Officer in charge of Stale Papers by receiving the application fee.

NOTES—First sheet.

GPB—30,000—20-3-06.

G. R. S. 12]
General and Revenue Secretariat..

Genl File No. 270 of 1908-09

Serial No.	
	2) Supt of Stamps — forwarding the deed of assignment & power of attorney to be embossed with stamps.
	3) Supt of Govt Press — forwarding the specification for expert opinion under sec 6 (2) of the Inv & Desgs Regn. (Cy sent 15-3-09)
	(2) Issue cdj 15/3/09
2.	To the Officer in charge S.H.Dy. No 5322 of 19/3/09 Forwards for credit into the Dy. the sum of Rs 10 received on addl fees.
3	To the Supt of Stamps. No 5323 of 19.3.09 Forwards for stamping the Power of attorney & the Deed of assignment together with the stamp fee of Rs 20-0-0
4	To the Supt Govt Press. No 5324 of 19.3.09 Forwards for enquiry & report, the specification of the invention.
5	Fr. the Officer in charge of Hazuri No 302 d 20.3.09 Acknowledges the receipt of fee of Rs 10 sent with Sl 2 above.
6	Fr. the Supt of Stamps. No 195 d 20.3.09 Returns only stamped the deed of assignment

f. 4091

NOTE—Contn sheet.

GPB—50 000—17-3-07

G. R. S. 12]
General and Revenue Secretariat.

Govt File No. 270 of 1908-09

Serial No.	
	and the Power of attorney sent with Serial 2 above.
4031	(3) The receipt of the documents mentioned in Sl 6 are acknowledged in Sl 8 of Govt 269 of 08-09.
	(4) This will await the report from the Supdt of Govt Press to whom the Sketch has been sent for opinion. Subl (27.3.09)
7.	Fr. The Supdt of Govt Press No. 812 d. 20.3.09. Requests with reference to Sl 3 above that the application of Mr Arthur Hansford Pollen on the same subject may be sent to this Office for reference.
	(5) Put forwarding the reference asked for is put up & submitted. Bus. (27.3.09)
	(6) Issue Subl 27/3/09
8	To The Supdt Govt Press No 968 of 2.4.09. Forwards as requested in Sl 7 the appl of Arthur Hansford Pollen for reference and return.
9.	Fr. the Supdt of Govt Press No 875/10/4/09 States that his opinion expressed in his letter No 947 of 24/4/09 will apply to this case also.

NOTE—Contn. sheet.

GPB—50,000—18-5-08

G. R. S. 12]
General and Revenue Secretariat.

File No. 270 of 1908-09

Serial No.

Hie, R with the invited file

(7) The reference quoted by the Subh is one received in connection with Q. No 268 of 1908, in which he says that "the inventions referred to were most beneficial and fully justifying the firm in making the application for leave to file a Specification. From this it can be inferred that he is in favour of exclusive privilege being granted in the case of present invention also.

(8) It is said that the applicants have obtained a patent in the United Kingdom but it is not stated whether they have applied for exclusive privilege in the Govt of India also.

This is not necessary

(9) May Messrs Remfry & Son be addressed in the latter behalf or may an order granting leave to file a Specn be issued? submitted for orders.

(Sd) 15/4/09. (10) It is not necessary to make further enquiry as suggested. But I believe in another file we have made certain enquiries as to the identity of the present applicants with the applicants on behalf of Appellants. We may await a reply to that reference on some days before passing orders in this - GBB 15/4/09

NOTE—Contn. sheet.

GPB—50,000—18-5-08

Serial No.

4334

(11) The reply referred to in para 10 of this note is received & put up with Gen. 173 of 1908-09 linked herewith for orders.

(12) The opinion of the Supt of Surveys to whom the Specification was sent for report seems to be in favour of the leave being granted.

(13) But in this case also the Specification is signed by Rupert Rempfry may this await the reply referred to in Q. No. 173 of 08-09 herewith linked.

(Gy bus. 11.5.09) 14. Leave may be granted

MB
14/5/09

15. A draft order granting leave to file a Specification and a draft covering letter forwarding the order are submitted for approval

Gy bus. 28.5.09.

Issue

MB
28/5

10 96852 of 2.6.09: The Lindtype & Machinery Co grants them leave to file a specification of their invention for Improvements in Typographical Composing machines

11 96853 of 2.6.09: Messrs Rempfry & Son: Forwards the above

NOTE—Contn. sheet.

GPB—50,000—18.5.08

Serial No. 12

2166

Letter Dated 26/11/09 from Messrs Remfry & Son Calcutta

Forwards Rs 30/- ~~off~~ 4 copies of the Specification and the Govt. order granting leave to file the Specification with a request that certain clerical errors in the Govt. order be rectified and the certificate in the bottom filled in and signed.

Submitted

The Specification copies were received on the 30th Nov: 09 which date is mentioned in the certificate. The certificate in the Order as well as in the Office draft have to be signed The clerical errors ~~noted~~ referred to by Messrs Remfry & Son are corrected and they have to be attested. The necessary corrections are made in the Office draft also 4 drafts are as usual put up.

1/12/09 VS.

3/12/09

P.T.O.

GPB—50.000—18-5-08

Serial No.	
13	To the Compiler Mysore Gazette. G. 3153 & 10 12/09 Notifies the filing of the Specification received with sl. 12
14	To Messrs Remfry & Sons Calcutta. G. 3156 & 10 12/09 Forwards, for communication to the parties concerned, a copy of the above and returns the order granting permission to file the Specification in th the endorsement at foot duly filled in & Signed.
15	To The Supdt Govt Museum, Chief Engineer & — State Geologist. G. 3157-9 & 10.12-09 Forwards for record in their offices a Copy of the Specification received with sl. 12
16	To the Officer in charge of the State Huzur Treasy. G. 3160 & 10.12-09 Remits Rs. 30/- being the fee received with sl-12 —
17	From the Supdt. Mysore Govt. Museum No 96 dated 13/12/09 Acknowledges the receipt of the copy of the Specification sent to him with sl 15
18	From the Chief Engineer No 9325 dated 14/12/09 Acknowledges the receipt of the copy of the Specification sent to him with sl 15

NOTE—Contn. sheet.

GPB—50.000—13-5-08

G. R. S. 12]
General and Revenue Secretariat.

G.M. File No. 270 of 190 9

Serial No.

Subd with serials 17 and 18 for perusal

The amount of Rs 30/- sent to the State Huzur Treasury along with sl 16 has been acknowledged with the amount of Rs 30/- sent to wit with ~~G.O~~ No G. 3154 dated 10/12/09 for which he has G.M. 173-08-19 sent a combined receipt vide sl 20 of G.M. 270 foll.

20/12/09 VS 20 Seen 28/12/09

19 From the State Geologist-
No 1383 dated 14/12/09
Acknowledges the receipt of the copy of the specification sent with sl 15
Subd 21 This may now be recorded

29/12/09 VS 5/1/10.

NOTE—Contn. sheet.

GPB—55,000—27-4-09

D 3874

Vol 13 B

Gen. 270 of 1908-09

1

From

REMFRY & SON,

Solicitors & Patent Agents,

Calcutta.

To

THE SECRETARY TO THE GOVERNMENT OF HIS HIGHNESS

THE MAHARAJA OF MYSORE, Gen. & Rev. Depts

Bangalore, Mysore.

U.K. 18579/07.

Dated Calcutta, 9th March 1909.

Sir,

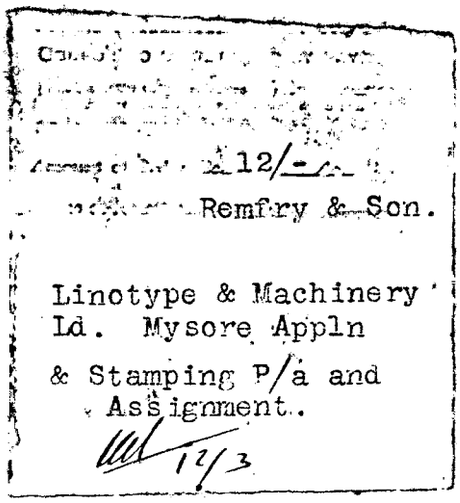
We have the honour to forward under separate cover an Application of LINOTYPE AND MACHINERY LIMITED, Linotype and Printing Machinery Manufacturers, of 188 and 189 Fleet Street, London England, for leave to file a Specification under Part I of the Mysore Inventions & Designs Regulation 1894, in respect of an Invention for "IMPROVEMENTS IN TYPOGRAPHICAL COMPOSING MACHINES" and solicit the favour of your submitting the same to his Highness the Dewan of Mysore.

The Power of Attorney under which we are acting and a Deed of Assignment from Messrs Lock, Pearce & Billington are sent herewith and we solicit the favour of your having same stamped ₹1/- each. The prescribed fee of ₹10/- for the Application and 2/- for such stamping is sent by Post Office Order.

Application was made for a corresponding Indian Patent on the 8th instant, being Register No 130 of 1909.

Wehave the honour to be,
Sir,
Your very obedient servants,

REMFRY & SON.


Remfry & Son.
Linotype & Machinery
Ld. Mysore Appln
& Stamping P/a and
Assignment.
12/3

20 Bs V

12/3

Mysore.

1/-

3

POWER OF ATTORNEY.

IN THE MATTER of the Inventions and Designs Regulation 1894 of the Government of Mysore and in the matter of Linotype and Machinery Limited, Linotype and Printing Machinery Manufacturers, of 188 and 189 Fleet Street, London, England.

We, the above-named LINOTYPE AND MACHINERY LIMITED, do hereby retain, constitute and appoint HENRY HAMILTON REMFRY and RUPERT REMFRY, Solicitors, and HAMILTON GREEVES REMFRY, Patent Agent, all of Hastings Street, Calcutta, as our Agent and Attorney to apply for and obtain from the Government of Mysore and keep in force an Exclusive Privilege or Letters Patent for IMPROVEMENTS IN TYPOGRAPHICAL COMPOSING MACHINES and we authorise them to sign our name to such papers and writings and do such acts regarding the same, including the appointment of a substitute or substitutes, as may be necessary or expedient.

THE COMMON SEAL of Linotype and Machinery Limited was affixed hereto in the presence of the subscribing Directors and Secretary this 12th day of August 1908.

x A. Montague James
x
} Directors.

x
Secretary.

Mysore.

1907 Aug 4

ASSIGNMENT.

WHEREAS, we, WILLIAM HENRY LOCK, a Director of LINOTYPE AND MACHINERY LIMITED of 188 and 189 Fleet Street in the City of London, England, and HERBERT PEARCE and JOHN ERNEST BILLINGTON of the Linotype and Machinery Works, Broadheath in the County of Chester, England, Engineers, have applied for Letters Patent of the United Kingdom of Great Britain and Ireland No. 18579. dated the 16th day of August 1907 for IMPROVEMENTS IN TYPOGRAPHICAL COMPOSING MACHINES:

NOW therefore know ye that for and in consideration of the sum of Five pounds to us in hand paid, the receipt of which is hereby acknowledged we the said William Henry Lock, Herbert Pearce and John Ernest Billington have assigned and transferred, and by these presents do assign and transfer unto Linotype and Machinery Limited of 188 and 189 Fleet Street, London, England, hereinafter called the said Company, their successors and assigns, the whole right title and interest in and to the said Letters Patent to be obtained for the said invention from the Government of Mysore and all and singular the liberties, powers, privileges and advantages whatsoever appertaining or belonging thereunto, the same to be held and enjoyed by the said Company their successors or assigns for the full term for which such Letters Patent may be granted, or any prolongation or extension thereof, as fully and entirely as the same could

MYSORE GOVERNMENT 20 MAR 1909 GENERAL STAMP

have been held and enjoyed by us had this assignment not been made.

IN WITNESS whereof we the said William Henry Lock, Herbert Pearce and John Ernest Billington have hereunto set our hands and seals this 4th day of August 1908.

SIGNED SEALED AND DELIVERED by the said William Henry Lock in the presence of) William Henry Lock

Godfrey Hedges
188 Fleet Street London England
Stenographer

Chas Geo. Bartlett
188 Fleet Street, London, England
Commercial Clerk

SIGNED SEALED AND DELIVERED by the said Herbert Pearce in the presence of) Herbert Pearce

Frederick Sullivant
Clerk
The Hollies Prion Rd
Dawdon Cheshire England

Arthur Poole
Clerk. 92 Linden Avenue Altrincham
Cheshire England

SIGNED SEALED AND DELIVERED by the said John Ernest Billington in the presence of) John Ernest Billington

Frederick Sullivant
Clerk
The Hollies Prion Rd
Dawdon Cheshire England

Arthur Poole
Clerk. 92 Linden Avenue Altrincham
Cheshire England.

18579/07.

MYSORE.

6

TO

THE DEWAN OF MYSORE.

The Application of LINOTYPE AND MACHINERY LIMITED, Linotype and Printing Machinery Manufacturers, of 188 and 189 Fleet Street, London, England, for leave to file a Specification under Part I of the Mysore Inventions & Designs Regulation 1894.

1. WILLIAM HENRY LOCK, HERBERT PEARCE and JOHN ERNEST BILLINGTON, of whom the Applicants are the Assignees have obtained a Patent in the United Kingdom No: 18579 dated and sealed as of the 16th day of August 1907, and actually sealed on the 4th day of February 1909 for "IMPROVEMENTS IN TYPOGRAPHICAL COMPOSING MACHINES".

2. To the best of the information and belief of the Applicants, the invention is new within the meaning of Part I of the Inventions & Designs Regulation 1894 & no circumstance exists which, if the Applicants are authorized to file a Specification and file it in accordance with that Part, will disentitle them to an Exclusive Privilege thereunder in respect of the Invention.

3. The following is a description of the Invention:-

REMFRY & SON.
SOLICITORS AND
PATENT AGENTS,
CALCUTTA.

1857.7 08

1

This invention relates to typographical composing machines, composing matrices or type dies, irrespectively of whether the ultimate result of their operation be linotypes, lines of type or only stereotypers'

matrices, and which machines are of a type characterised by a tier of magazines, each carrying its own escapements, the said tier interposed between a single keyboard, a single set of connections therefrom to the escapements on the magazines, and a single assembler entrance, on the one hand, and a single magazine entrance and a single distributor on the other, and means for moving the tier up and down to effect a "quick change," *i.e.*, to quickly make the one containing the desired fount (or substituted magazine) register with the assembler entrance and the magazine entrance. It is characterised by certain improvements in the tier of magazines; in the "quick change" mechanism, in means for balancing the weight of the tier during a "quick change"; in means for ensuring exactness of register on the part of a substituted magazine after each "quick change"; and in the co-operation of the magazine entrance with the tier of magazines.

One object of the invention is to effect improvements in the Mergenthaler linotype machines described in the specifications of British Letters Patent 9570 of 1897 and 15058 of 1904, in respect of the escapements of the former, and in the connections between the keyboard and the escapements of the latter. The application of the invention to a Mergenthaler linotype machine has been chosen for specification as the best means of making the nature of it clearly understood.

L. & M. Ld. per

Referring to the accompanying drawings, which are to be taken as part of this specification and read therewith,

Figure 1 is a side elevation from the right of a machine made according to the present invention, and showing the top magazine in ensured register with the distributor and the assembler entrance:

Figure 2, a front elevation of the assembler guide and adjacent parts:

Figure 3, a detail side elevation from the right, of the keyboard portion of the means for "quick changing" and ensuring exactness of register on the part of the magazines:

Figure 4, a front elevation corresponding with figure 3 :

Figure 5, a plan corresponding with figures 3 and 4 :

Figure 6, a detail side elevation from the right, showing how the several magazines of a tier are held together :

Figure 7, an enlarged detail sectional elevation from the right of the matrix escapement mechanism shown in connection with the middle magazine, that being the one in register with the assembler entrance and the magazine entrance :

Figure 8, a plan of a magazine frame :

Figure 9, a section on the line 9-9 of figure 8 :

Figure 10, a detail front elevation of the rear pair of magazine locating ~~m~~ea~~i~~ns :

Figure 11, a side elevation of figure 10 from the right :

Figure 12, a front elevation of the part of the machine frame known as the distributor bracket :

Figure 13, a side elevation of figure 12, from the right :

Figure 14, an inverted plan of the bottom magazine of the tier :

Figure 15, a plan of the top of any magazine of the tier :

Figure 16, a front elevation of figure 15 :

Figure 17, a side elevation of figure 15, from the right :

Figure 18, an inverted plan of any upper magazine of the tier :

Figure 19, a front elevation of figure 18 :

Figure 20, a side elevation of figure 18, from the right :

Figure 21, ~~is~~ a plan ; figure 22, ~~is divided into two halves, which together form a~~ front elevation ; and figure 23 ~~is~~ a side elevation from the right, of the rear member of an escapement bar :

Figure 24, ~~is~~ a plan ; figure 25, ~~is~~ a front elevation ; and figure 26, ~~is~~ a side elevation from the right, of the top middle member of an escapement bar :

Figure 27, ~~is~~ a plan ; figure 28, ~~is~~ a front elevation ; and figure 29, ~~is~~ a side elevation from the right, of the front member of an escapement bar :

Figure 30, ~~is~~ a plan of an escapement bar :

Figure 31, a side elevation of figure 30, from the right :

Figure 32, ~~is~~ a plan ; figure 33, ~~is~~ a rear elevation ; and figure 34, a side elevation from the right, of the transverse bar that carries the escapement striker levers :

Figure 35, a side elevation shewing the register-ensuring means out of engagement with the locating blocks :

Figure 36, a side elevation shewing the register-ensuring means co-operating with the middle magazine :

Figure 37, a replica of figure 36, but in respect of the bottom magazine of the tier ; and

Figures 38 to 43 inclusive, detail sectional elevations of modifications of the escapement mechanism shewn in figure 7.

1, 1 are parts of the frame of the machine ; 2, the single keyboard ; 3, one of the single sets of escapement rods, the several rods of which are raised by the respective keys of the keyboard ; 4, the single distributor ; 5, a part of the machine frame known as the distributor bracket ; 6, the single assembler entrance ; 7, the assembler guide ; 8, the assembler belt ; 9, the magazine frame ; 10, one of the set of springs that pull the escapement rods 3 down after they have been raised ; 11, the notch in the top end of an escapement lever ; 12, the magazine entrance ; 13, the entrance mouth of a magazine, and 14, the matrix trough.

Tier of Magazines, figures 1, 6 to 7, 14 to 20. The tier of magazines illustrated comprises three, 15, 16, 17, but this number is variable according to the requirements of each user of the invention. The bottom magazine 17 of the tier rests—figures 1 and 7—upon the magazine frame 9. This has hitherto been a substantially flat frame having the bottom magazine of its tier held to it by suitable means. Inasmuch as the several matrix grooves 100 in the magazine must register exactly with the respective divisions of the assembler entrance 6, and the magazine is positioned obliquely on the machine, it follows that

devices are necessary to position it correctly in a forward as well as in a lateral sense. According to the present invention, there are—figure 8—a series of parallel, transverse grooves 18 in the top face of the frame 9. These grooves are of uniform sectional area; are, preferably, equidistant; and, in addition to being parallel with each other, are parallel with the front of the machine. The bottom face—figure 14—of the said magazine 17 has a similar series of bars 19 to engage slidingly in the respective grooves 18. There are one or more intervals 20 in each bar 19, but none of the intervals in any of the said bars, are exactly opposite, in a front and rear sense, to those in any other bar of the series. All the intervals 20 are of uniform size. The magazine frame 9 has in its grooves 18, blocks 21 of the same size as the intervals 20, the said blocks 21 corresponding in number and approximately in position, with the said intervals, respectively. Each block 21 carries a screw device 22 that allows it to be moved laterally by the magazine 17 as the latter is being moved to the right or left to put it into register as next explained, and by which it can be fixed in its groove 18 when that position has been ascertained. All such positions are ascertained by laying the magazine 17 down on the frame 9, with its intervals 20 straddling the respective blocks 21, moving it laterally until its matrix grooves 100 register exactly with the respective divisions of the above-mentioned assembler entrance 6, and then fixing the said blocks 21 in the respective positions into which the lateral adjustment of the magazine 17, has moved them, by tightening up the screw devices 22. The positions of the blocks 21 are now permanent and correspond with the working position of the magazine 17, so that each substituted bottom magazine is obliged, by the engagement of its intervals 20 with the respective blocks 21, when it is placed upon the frame 9 to drop into working position, and is also prevented from dropping into any other. The above-mentioned engagement of grooves 18 and bars 19 has also the effect of correctly positioning a magazine 17 in a forward sense.

Each magazine in a tier, irrespective of whether it is a top one as 15, a bottom one as 17, or an intermediate one as 16, has—figure 15—across its top, a series of parallel transverse bars 23; and each magazine above the bottom one, has—figures 1, 18, 19 and 20—heels 24 on its bottom face, adapted to engage behind the respective transverse bar 23 to prevent those magazines slipping downwards. Some of the bars 23 on each magazine have—figures 1 and 6—at each end, a bracket 25 fixed to it and a set screw 26 working laterally therein and bearing against the respective side of a heel 24 depending from the magazine above for the purpose of setting it laterally.

All the magazines of a tier are held together so as to constitute one entity, movable or stationary, by bolts 27—figures 1 and 6—passed through the projecting ends of the transverse bars 19, 23. These bars have—figures 14 and 15—forked ends 28 instead of bolt holes, the forked ends registering with each other in tiers as shewn in figure 1, so that the bolts 27 can be detached laterally therefrom after their nuts have been slackened, instead of their full lengths having to be drawn through holes after their nuts had been unscrewed off them. Other bars 29—figures 1, 6, 7 and 15—extend down the tops of the magazines flush with the transverse bars 23, thereby forming a surface upon which a magazine that is being taken off the machine, can slide, it being understood that the direction of this taking-off is frontwards. It is to be noted in the case of a bottom magazine 17, that as it is being slid down over the frame 9, the intervals 20 will not catch against the blocks 21 below and in front of them, because none of the said blocks are in the frontward paths of the said intervals.

"*Quick change*" *mechanism*—figures 1, 3 to 9 and 35 to 37. The frame 9 has guiding rods 30 symmetrically arranged thereon, depending therefrom, and working in sockets 31 fast to the machine frame 1. The frame 9 is raised and lowered to effect a "quick change" by the following combination:—an arm 32 presenting a grip within reach of the

operator and, preferably, situated on the right hand side of the keyboard 2; a transverse shaft 33 turning in suitable bearings in the machine frame, and to which the arm 32 is fast; a locking bolt 34 mounted to slide along the adjacent face of the arm 32 and projecting to the rear from an arm 36 pivoted at 37 to the arm 32, extending to the front thereunder and held away from it by a spring 35; a fixed notched quadrant 38 carried by the machine frame 1 in such a position that when the operator is not pressing the arm 36 to the arm 32, the spring 35 will make the locking bolt 34 engage in any one of its notches 39, 40, 41 or 42; an arm 43—figures 1 and 5—fast to the shaft 33 and projecting centrally and rearwardly therefrom; a lever 44 fulcrummed at 45 under the frame 9 and on the machine frame 1; a link 46 connecting the rear end of the lever 44 to the practical centre of the frame 9; and a connecting rod 47 from the front end of the lever 44 to the rear end of the arm 43. The three notches 39, 40 and 41, correspond with the respective magazines 15, 16 and 17, there being always as many notches in the quadrant 38, as there are magazines in the tier, and one additional notch 42. When the locking bolt 34 is engaged in the top notch 41 of the three, the bottom magazine 17 is in register with the magazine entrance 12 and the assember entrance 6. The additional notch 42 is always situated above the said top notch 41 in order that the engagement of the locking bolt 34 in it shall hold the tier of magazines high enough to expose all the escapement lever springs (described further on) above the top of the assembler entrance 6.

We believe ourselves to be the first to combine a lever with a tier of magazines for effecting a "quick change" of the latter and we claim this combination in its widest sense. Attention is drawn to the fact that the direction in which the lever 42 must be moved coincides with that in which the tier must be moved to attain the desired result. This coincidence is not indispensable to the invention, but it is preferable to having the directions opposite to each other, for the reason that it is the simpler arrangement, and saves the operator the trouble of thinking about the

direction in which the said lever must be moved to move the tier in a given direction. But for the reason just stated, it is preferred that the two directions should coincide.

Balancing the tier of magazines.—Figures 1, 8, 9 and 35 to 37. This is effected, nearly but not quite, by a spring 48 pulling from a tension-adjusting bracket 49 on the front of the machine, upon the rear end of an arm 50 fast to and extending to the rear from a traverse shaft 51 turning in suitable bearings in the machine frame 1. This shaft 51 has two arms 52, 52, fast to it at a suitable angle with the arm 50, one on each side of the link 46, and having their front ends connected by links 53, 53 to the pivot of the connection between the said link 46 and the magazine frame 9. The three arms 50, 52, 52 are obviously the equivalent of a single lever fulcrummed on the shaft 51. The respective positions of the spring 48 and the lever 50, 52, 52, may be modified to the extent of being reversed. It is preferred that when the spring 48 is fully extended, the advantage of the leverage shall be with the tier of magazines; and that when the spring is collapsed, the said advantage shall be with the said spring. The latter is not connected directly to the arm 50 but by an intermediate chain 54 co-operating with a cam 55 on on the said arm. The practical point of attachment of the spring 48 to the arm 50, will always be that at which the chain 54 joins the cam 55, *i.e.*, it will be constantly changing according to the position of the lever mechanism, so that a perfectly regular movement will be imparted to the tier of magazines.

~~The balancing agent in the means just described is the spring 48. It is well known that no spring is constant, *i.e.*, that its effective changes *crescendo* or *diminuendo* according to the degree of extension. The function of the chain 54 and cam 55 is to compensate for this change and so make the effective of the said spring 48 practically constant. Now, a freely falling weight is the mechanical equivalent of a constant spring. Consequently, the present invention is to be understood as including the~~

~~combination with the tier of magazines of any balancing means, the agent in which is either a spring or an arrangement of springs, or a freely falling weight.~~

Ensuring exactness of register after a "quick change."—Figures 1, 3 to 8, 10, 11 and 35 to 37. There is always wear at the pivots of the "quick change" mechanism described above, and this wear becomes in time, enough to prevent the magazine that is substituted by the "quick change" registering exactly with the magazine entrance 12 behind it, and with the assembler entrance 6 in front of it. Exactness of register is ensured by the following means—Figures 1, 6 to 11, and 35 to 37. 56 is a block fast to the magazine frame 9, near each corner of it, two on one side of the said frame, and two on the other. Each block has a slot 57 along its outer side face, the four slots being from front to rear, with their top faces parallel with the slope of the tier of magazines as well as in the same plane, and their bottom faces inclined downwards and rearwards. 58, 59, 60, 61 are four equal and upstanding arms, one mounted behind each block 56 on some convenient part of the machine frame 1, to rock in a plane parallel with the front to rear median line of the tier of magazines. Each front arm, 58, 61, turns on a stud 62 projecting laterally from the machine frame 1, while the two rear arms, 59, 60, turn on a transverse shaft 63 carried by the distributor brackets 5—figure 10. Each of the four arms, 58 to 61, carries studs 64, which project laterally and inwards therefrom towards the respective side of the tier, to be behind, and to engage in, the slots 57. There is only one plane of slots 57, but there are as many studs 64 on an arm 58, 59, 60 or 61, as there are magazines in a tier. The axes of these arms are in a plane parallel with the slope of the tier of magazines, figure 1, and the studs 64 are equal in size, those on any one arm equidistant from each other, the whole number being thus distributed in three planes parallel with each other as well as with the one last mentioned, and at the same distance from each other as that which separates the three magazines, 15, 16 and 17, from

each other, centre to centre. ~~Each stud 64 has, preferably, an eccentric bearing in the respective arm, instead of being fast therein, in order the moment at which it contacts with the respective slot 57 after the respective arm has begun to move, may be adjusted exactly, and in addition thereto a device for locking it in its adjusted position.~~ Consequently, there is a tier of studs to ensure exactness of register of each magazine when the latter is in register with the magazine entrance 12 and the assembler entrance 6. It is with the top faces of the slots 57 that the respective plane of studs 64 engages, because as the weight of the tier of magazines overcomes the spring 48, the motion to ensure exactness of register, must be upwards. As soon as the operator has made the magazine to be substituted for its predecessor, register with the magazine entrance 12 and the assembler entrance 6 as exactly as the "quick change" mechanism before described, is capable of doing, the four slots 57 register with the respective four studs 64 and the latter are forthwith pulled into the said slots by springs 65 adapted to constantly urge the arms 58 to 61, into the register-ensuring position.

The ensuring means just described must be disengaged from the blocks 56, *i.e.*, from the magazine frame 9 because the said blocks are fast thereto, before another "quick change" can be effected. This disengagement is effected by the following means. The arm 36 of the locking bolt 34 already described has a rearwardly projecting arm 66, the two constituting, in this respect, a bell crank lever. The arm 66 carries a roller 67, which it holds in contact with an arcual surface 68 on an arm 69 slotted at 70, 71 to move in a frontward or rearward sense over the shaft 33 and a fixed stud 72 to the rear under the pull of a spring 73, pulling on it from a fixed point 74 on the machine frame and to the front under the action of the bell crank lever just mentioned when the arm 36 is pressed upwards to the arm 32. The rock of the arm 66 is equal to the unlocking motion of the arm 36, and the arcual surface 68 maintains

contact between the said bolt 34 and arm 69 during such rock. The arm 69 carries a vertical arm 75 which is loosely connected as by a slot and stud device 144 to the adjacent upstanding arm of a bell crank lever 76 rocking freely on its fulcrum which may be and conveniently is the shaft 33. The other and rearwardly projecting arm of this bell crank lever 76 is pivotally connected to the bottom end of a connecting rod 77, the top end of which is similarly connected to the frontwardly projecting arm of a bell crank lever 78 which turns on the right hand stud 62. The other arm—an upstanding one—of the lever 78, carries a lateral stud 79 in front of the arm 58 to rock it backwards against the pull of its spring 65, thereby disengaging the particular stud 64 then in engagement with the respective locating block 56, from it. A disengagement is effected whenever the operator presses the arm 36 to the arm 32, because the consequent motion of the roller 67 over the surface 68, pulls the arm 69 to the front, and through the arm 75, lever 76, rod 77, lever 78 and stud 79, rocks the arm 58 to the rear. But all four arms 58, 59, 60 and 61 must be rocked backwards together and, for that reason, means are provided by which the other three arms, 59, 60, 61, simultaneously reproduce the backward rock of the arm 58. There does not happen to be room for the axis of the arm 58 and lever 78 to be continued transversely through the machine illustrated. That being the case, the energy of the lever 78 is carried round the machine frame 1, *i.e.*, rearwards to the second arm 59, transversely to the third arm 60, and finally frontwards to the fourth arm 61. This carrying round is not an essential feature of the invention, but only a concession to the lack of room just referred to. It is effected by a third arm 80 on the lever 78 and depending therefrom a link 81 from it to the outer end of an arm 82 fast to and depending from—figures 8, 10 and 11—the transverse shaft 63 already mentioned as turning in bearings in the distributor bracket 5; an arm 84 fast on the shaft 63 and holding a stud 85 in front of the second arm 59; ~~the~~ an arm 86 likewise fast on the shaft 63 and holding a stud 87 in front of the third arm 60; an arm 88—figures

1 and 8—turning on the left hand stud 62 and holding a stud 89 in front of the fourth arm 61 ; and a link 90 connecting the two arms 86 and 88. The three arms 84, 86, 88 hold their respective studs 85, 87 and 89 in the same angular position as the lever 78 holds its stud 79, so that the engagements of the said studs with the respective arms 58 to 61 are simultaneous.

The above described "quick change" mechanism and the means for ensuring exactness of register, act as follows. So long as any magazine is being composed from, the co-operation of the "quick change" mechanism and the register-ensuring means hold it in exact register with the magazine entrance 12 and the assembler entrance 6. When the operator has to make a "quick change" he presses the locking-arm 36 up to the grip of arm 32, thereby withdrawing the locking-bolt 34 from the quadrant 38 and the four studs 64, then in the slots 57, from the latter, thereby freeing the frame 9. The arm 32 is then raised or lowered, the arm 36 being kept up to it, until the locking-bolt 34 is opposite that one of the notches below the additional notch 42 in the quadrant 38, which corresponds with the desired substitution of magazine, thereby putting that magazine in register with the magazine entrance 12 and the assembler entrance 6. The locking-arm 36 is then released, the locking-bolt 34 pushed into the selected notch by its spring 35, and the respective plane of studs 64 pulled into the slots 57 by the four springs 65, the spring 73 at the same time returning the arms 69 and 75, the lever 76, the rod 77, and the lever 78.

~~The essence of the invention in respect of the means for ensuring exactness of register, consists in the combination of one plane of studs with a plane of tapered surfaces for each magazine of the tier, and means for engaging the said plane of studs with the selected plane of tapered surfaces with each other and for disengaging them from each other. Consequently, the constructional details of these ensuring means may be varied within the limits just indicated. The following are instances of variations within the said limits.~~

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~~The slots 57 are described and shown as being on the magazine frame 9 and the arms 58, 59, 60 and 61, as being on the machine frame 1. But the slots 57 might be on the machine frame 1, and the arms 58 to 61 be on the magazine frame 9.~~

~~There is described and shown one plane of slots 57, and several planes of studs 62. There may be one plane of studs 62, say on the arms 58 to 61, and several planes of slots, say, on the tier of magazines.~~

~~Any combination of slots 57 and studs 62 may be replaced by one of tapered sockets and tapered studs.~~

Matrix escapement mechanism—figures 1, 2, 7 and 21 to 34. The delivery mouth of a magazine consists—figure 7—of a flat bar 91 rebated along the front edge of the top plate 92 of a magazine, and a second bar known as the "escapement bar" which is rebated along the bottom plate 93 of a magazine, these two bars being bolted together and to the magazine as by bolts 94. The escapement bar consists of three members—a rear member 95, a middle member 96 and a front member 97—held together by any suitable means, such as keys 98 and screws 99, and is itself fixed to the bottom plate 93. The well-known matrix grooves 100 in the opposite faces of the top and bottom magazine plates 92, 93 are continued—figures 21 to 30—through the opposite faces of the bar 91 and the escapement bar. 101 is one of the improved escapement levers. It has a front pawl 102 and a rear pawl 103 engaging with the two respective matrices through holes as heretofore, but these holes are in the escapement bar—figure 7—and each pawl is connected to the respective end of the lever 101 by a tooth 104 engaging in a recess in the said end after the manner of a rack and pinion gear. All the escapement levers 101 are threaded upon a rod 105 which is supported in any convenient manner by the middle member 96 of the escapement bar in such a way as to serve as a pivot for them all. The top edge of each lever 101 is bevelled downwards to the front and rear from a line above its axis, to allow of its being rocked. This rocking is effected in one direction by one

escapement spring as heretofore and in the other by a pusher. An escapement spring 106—figure 7—consists preferably of a long arm, a short arm, and a coil connecting them, the two arms being approximately parallel with each other and on the same side of the coil. Each spring is held to the front member 97 of the escapement bar by having its short arm inserted in a socket in the front face of a recess extending along the front face of the said member and deep enough to receive the coil. When a spring 106 is so fixed, its longer and operative arm extends rearwards far enough to be inserted in the respective front pawl 102. 107 is a rod threaded through the coils of all the springs 106 and made fast to the front ~~nu~~me mber 97 of the escapement bar. The normal effect of a spring 106 is as heretofore, viz., to hold the respective front pawl 102 in front of the top lug on the respective leading matrix and its rear pawl 103 ready to engage in front of the corresponding lug on the next matrix as the lever 101 is reversed. The connection between each lever 101 and the co-operating rod 3, consists of a tooth 108 depending from the bottom edge of the lever ; a pusher 109 aligned with the said lever in front of it, sliding in a suitable guide on the bottom plate 93, in constant touch with the tooth 108, straddling a transverse bar 110 on the said plate 93 which limits its motion in both directions ; and held by the respective spring 106, with its head flush with the plane of the magazine delivery mouth; a vertical lever 111 having a striking head 112 on its top, and held normally a short distance in front of the pusher 109 ; and a bell crank lever having one arm 113 in constant touch with the bottom end of the lever 111 behind it and its other arm 114 constantly engaged in the notch 11 on the top of the rod 3. The set of levers 111 with their intermediate anti-friction plates (not shown) are threaded upon a rod 115, and the set of bell crank levers with their intermediate anti-friction plates (likewise not shown) are threaded on a pivot rod 116. The ends of these rods are carried by two cheeks, one, 117, at each end. Instead of there being a distinct set of anti-friction plates for each set of levers, one set of the

same contour as the cheeks 117, suffices. 118 is a rod threaded through the cheeks 117 and the anti-friction plates, behind the bottom arms of the levers 111, and up to which the springs 10 rock the said arms. The parts 111 to 118 are held in working position by fastening the cheeks 117 to the end lugs 119 of a transverse bar 120 fast the back plate of the assembler guide 7. The slots 121—figures 32 to 34—in the rear face of this bar receive the front edges of the anti-friction plates just mentioned. 122 is a spring in front of each lever 111 and constantly urging its striking head 112 to make the respective pusher 109 push the tooth 108 backwards against the action of the spring 106, to reverse the respective escapement lever 101, but the head 112 is kept clear of the pusher 109 and the spring 122 in tension by the respective spring 10. A spring 122 is shown as consisting of a length of spring wire having two arms of unequal length at right angles with each other and joined by a coil, and as being fixed in working position by having its short arm inserted in a socket 123 in the front face of the bar 120. 124 is a rod threaded through the coils of the set of springs 122, and the lugs of the bar 120. An escapement rod 3 is raised against the pull of its spring 10 by its corresponding key lever on the keyboard 2 as heretofore. As soon as a rod 3 is so raised, the corresponding levers 111 and 113, 114, are freed from the control of the respective spring 10, and the spring 122 drives the striking head 112 rearward, thereby making it reverse the escapement lever 101, and release the leading matrix. There is an opening in the above-mentioned back plate of the assembler guide 7, in front of the set of springs 122, of sufficient area to give easy access to them all and to the immediately adjacent parts. It is closed by a cover 125, which is removable by being slid in a lateral direction on the back plate of the assembler guide 7.

Modifications of the matrix escapement mechanism -- figures 38 to 43. The connection between each pawl 102, 103, and the respective end of

their escapement lever 101, illustrated in figure 7, may be replaced by a ball or disc 126, projecting from the respective edge—figure 38—or from the respective corner—figure 43—of the pawl, and engaging in a co-operating cavity in the respective end of the said lever 101.

According to the construction illustrated in figure 7, a front pawl 102 is pulled down out of engagement with a leading matrix 127 and a rear pawl 103 pushed up to be ready to engage with a following matrix 128, as a consequence of the rise of the respective escapement rod 3. The latter is raised by positive means, and the two pawls 102, 103, must move together because they are both connected to their lever 101. But if the matrices are sticky—and they sometimes are so—they will not slide down the grooves 100 as quickly as they ought to do, the consequence being that a front bottom lug 129 of a following matrix 128 will be caught by a rear pawl 103, instead of the latter engaging in the space 130 between the said front bottom lug 129 and the rear bottom lug 131 on the same matrix. This would check the rise of the rod 3 as well as the action of the pusher 109 and intermediate parts, with the result that some part of the escapement mechanism, say the positive means that raises the rod 3, would be damaged. To prevent such damage, there is introduced at some convenient point between each rod 3 and the respective pusher 109, an automatic yielding pressure device which will allow the said rod 3 to rise as high as it is required to do, in spite of the fact that the said pusher 109 is checked in the way explained above. One form of such device is illustrated in figures 38 and 39 and a substitute one in figure 40.

Referring to figures 38 and 39, a lever 111 is replaced by one 145 rabbetted from the line 146 upwards, to receive the lower portion of an arm 147 rabbetted from the line 148 downwards, so that when both are threaded on the rod 115, their joint thickness is not more than that of a lever 111. The arm 147 carries the striking head 112. 149 is a spring resilient between the lever 145 and the arm 147 and forcing their top

ends apart. A spring 149 is strong enough to transmit the energy of the rod 3 to the pusher 109, so long as the latter is not checked and weak enough to yield before that energy when the said pusher is checked. The line 146 and the bottom end of the arm 147, are shewn as straight, but they may obviously be curved, provided that they are concentric with the pivot rod 115.

Referring to figure 40, a lever 111 has its lower arm 132 endowed, as by being of tempered spring steel, with the strength and weakness described in connection with the spring 149.

Each of the figures 38 to 43 shew a striking head 112 as made to actuate the respective pusher 109 by the rise of a rod 3, so that the connection between the said rise and the lever 111 or its substitute 145 is a positive one. Figure 38 shews it as consisting of a rack 154 on the rod 3; a gear 155 on the bottom end of the lever 145; and a gear 156 turning on the pivot rod 116 engaging with both rack 154 and gear 155. Figures 39 and 40 shew it as consisting of a notch 157 in the top of the rod 3; a bell crank lever turning on the pivot rod 116 having one arm 158 engaging with a working fit in the notch 157 and the other 159 forked to embrace with the working fit, the rounded bottom end 160 of the lever 145 or 111.

Figure 41 shews a striking head 112 carried by the upper arm of a bell crank lever 161 pivotted on the pivot rod 116, the lower arm of which is cranked to the front to rest upon the top of the respective rod 3 which is cranked accordingly. 162 is a spring pulling on the front of each upper arm from a fixed point in the transverse bar 120 to return the striking head 112 and lever 161.

Figure 42 shews that the rise of a rod 3 rocks a lever 111 through a bell crank lever 163 turning on the pivot rod 116 and having its top arm engaging with the rear of the bottom arm of the said lever 111, the latter being returned by a spring 162 as in figure 43.

In figure 43, a lever 161 is returned by the drop of the respective

rod 3 up to a stop rod 164, the top of the said rod being notched to embrace the frontwardly projecting end of the said lever.

Figures 38 to 43 indicate further that an escapement rod drops by its own weight as distinguished ~~by~~ from being returned by a spring 10.

The bottom plate 93 of a magazine is too thin to provide room for the pivot rod 105 of a set of escapement levers 101. It must therefore be in a separate piece, and that piece must be a depending piece with reference to the magazine. But the farther the pivot rod 105 is below the top of the plate 93, the longer will be the versed sine of the arc made by each escapement pawl, and, consequently, the wider must be the pawl holes in the said plate. When the escapement levers F of the prior patent (95/05/1897) have been practically pivotted on the pivot rod b^5—see figure 2 of that patent—the pawl holes are wide enough for the lugs of the matrices to drop into, and that is fatal to the working of the machine. According to the construction illustrated in the drawings accompanying the present specification and described therewith, the pawl holes in the plate 93 are only just large enough to pass the pawls. Again, the spring F^5 that worked the escapement F is a helical one possessing a certain minimum resilience which means a certain minimum diameter and that means further increasing the distance between two adjacent magazines, further that is after they have been distanced enough to receive the depending piece above mentioned; and such further increase is practically inadmissible. The present construction substitutes for the helical springs of the said prior patent, springs whose resilience is independent of their diameters and which lie within the space between the top of plate 93 and the bottom of the escapement levers 101, and ~~the~~ pushers 109 that are certain to act because they butt against surfaces—the teeth 108—at right angles to their own motion, and the rock of the teeth 108 will be through an increasing arc for each unit of the rearward motion of a pusher 109; whereas the piston on the rod F^4 of the said prior patent must move some distance before it can appreciably rock the escapement F.

With reference to the combination of the striking levers 111 and the escapement rods 3, the present invention does not change the position of the latter—it only shortens them to make room for the descent of the tier of magazines to the lowest position. The combination of cheeks 117 and the anti-friction plates occupies space that has always been vacant in this type of machine.

In the prior patent (1505) an average slide 8—see figure 3 of that patent—is thicker than the distance between two adjacent columns of matrices, thereby necessitating an increase in the width of the magazine without any increase in its working capacity. The present invention puts nothing in the said distance, because the thickest lever 111 is not so thick as the thinnest matrix in the fount even including the clearance necessary to its delivery from the delivery mouth of its magazine.

Co-operation of the tier of magazines with the magazine entrance—figure 1. The presence of an escapement bar necessitates a space 150 between each two adjacent magazines and as the latter are parallel with each other, the entrance mouths 12 of the said two magazines, are separated by the same space. The magazine entrance 12 is, as heretofore, functionally a curved and channelled plate connecting the distributor 4 with the magazine and is pivotted with reference to the latter in order that it can be rocked to the rear to expose its concave face in the event of matrices becoming jammed in it, in order that such jam may be relieved. So long as there was only one magazine on the machine and that a stationary one, it was a matter of indifference as to which part of the machine, the said magazine entrance was pivotted. But the present invention contemplates the presence on the machine, of a tier of magazines movable up or down, and of only one distributor and one magazine entrance. Consequently the latter must be pivotted so that it is independent of the movement of the magazines while it retains its capacity of registering with the distribtor 4. It is therefore pivotted by its two end plates 137 to the respective sides of the distributor bracket 5. Each side

jumping—down the rocked-back magazine entrance 12. Each space 150 is therefore closed by a closer consisting of a pair of angle bars 152, 153, one fixed to the bottom plate 93 of each upper magazine and the other fixed to the top plate 92 of the next magazine below it, both bars having their upright flanges flush with the magazine entrance mouths 13 and too close to each other for the thinnest matrix to get between them. A closer might be, as far as mere closing is concerned, of channel section. But it is desirable that both the top and bottom plates, 92 and 93, of a magazine should be stiffened along the respective entrance mouth 13. A closer of channel section would do this but it would also hold the magazines fast to each other and such holding is not wanted. Further, a closer of channel section fast to the bottom plate 93 of any magazine in the tier, although not holding two adjacent magazines fast together, would, as it was being slid down over the magazine below it, foul the brackets 25 on the latter.

Having now particularly described and ascertained the nature of our said invention and in what manner the same is to be performed, we declare that what we claim is :—

1. In a typographical composing machine of the described type, the combination of magazine frame grooved transversely ; bottom magazine, having transverse bars to engage in the grooves in the said frame ; blocks in the said grooves and corresponding intervals in the said bars to straddle and position the blocks ; and means for fixing the said blocks to the frame.

2. The combination with the subject matter of Claim 1, of upper magazines having transverse bars on their top and heels on their bottom faces to engage behind the respective transverse bars on the magazines respectively beneath them ; brackets on their sides and on those of a bottom magazine and set screws working therein and bearing against the magazine above to adjust it laterally ; a fork held by one or by each of more than one of the said transverse bars projecting laterally beyond the respective magazine so as to register with the forks above and below it ;

and holding bolts in each tier of forks and detachable laterally therefrom.

3. The combination with the subject matter of Claim 2, of bars extending down the tops of all the magazines.

4. In a typographical composing machine of the described type, a "quick change" mechanism consisting of an arm as 32; its fulcrum as 33; a notched quadrant as 38; a locking bolt as 34; an arm as 43; a lever as 44; a link as 46; and a connecting rod as 47.

5. In a typographical composing machine of the described type, the hereinbefore described means for balancing the tier of magazines.

6. In a typographical composing machine of the described type, the combination with a "quick change mechanism" of means for balancing the tier of magazines.

7. The combination with the subject matter of Claim 4, of means for balancing the tier of magazines consisting of a spring as 48; a lever as 50, 52, 52 having a cam as 55 and a chain as 54 connecting it to the said spring; and a link connection as 53, 53.

8. In a typographical composing machine of the described type, the combination with the tier of magazines, of a lever for moving the said tier up or down.

9. In a typographical composing machine of the described type, the combination with the tier of magazines, of a lever for moving the said tier up or down, the said lever having directions of movement coincident with those of the tier.

10. In a typographical composing machine of the described type, the combination with the tier of magazines, of means for balancing it consisting of a spring and a connection therefrom to the said tier.

11. In a typographical composing machine of the described type, means for ensuring exactness of register consisting of the combination of slots symmetrically arranged in one plane; arms symmetrically arranged about the tier of magazines and pivotted independently thereof; planes of studs carried by the arms; automatic means for putting a plane of studs

into the said slots ; and manual means for disengaging the studs of that plane from the slots.

12. In a typographical composing machine of the described type, the combination with the quick change mechanism of Claim 4, of the exactness of register ensuring means of Claim 11.

13. In a typographical composing machine of the described type, the combination with the " quick change " mechanism of Claim 4, of the balancing means of Claim 7.

14. In a typographical composing machine having a tier of magazines, the combination of an escapement bar between the delivery mouths of two adjacent magazines ; a set of escapement levers pivotted thereon ; a set of front and rear pawls connected to the said levers as specified ; a set of spring wire springs of the type shewn, supported by the escapement bar in front of the escapement levers and normally holding the front pawls in engagement with the leading matrices ; the set of pushers to disengage the front pawls from the leading matrices and position the rear pawls to engage with the following ones ; a set of striker levers ; their actuating springs ; and a lever in constant engagement with the respective escapement rod to hold the respective striker lever out of action until the said rod is actuated from the keyboard.

15. The several modifications in the subject matter of Claim 14 illustrated in Figures 38 to 43 and described therewith.

16. In a typographical composing machine of the described type, the combination of magazine entrance mouths in the same plane ; intermediate spaces ; a plate supported independently of the tier of magazines and so positioned that when the top magazine of the tier is in register, the said plate covers all the entrance mouths below the top one and all the said spaces ; and a space closer consisting of a bar fast to each of the two respective magazines and flush with its entrance mouth.

4. The Applicants, therefore, apply for leave to file a Specification of the Invention pursuant to the Inventions and Designs Regulation, 1894.

LINOTYPE AND MACHINERY LTD.

by their Attorney and Agent,

Rupert Remfry

I, RUPERT REMFRY, of Calcutta, Solicitor, the duly appointed Agent of the Applicants above named, do declare that the facts stated in this Application are true to my knowledge, except as to matters stated on information and belief, and as to those matters I believe them to be true.

Dated this 9th day of March 1909.

Rupert Remfry

REMFRY & SON.
SOLICITORS AND
PATENT AGENTS,
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190

From

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To

The Officers in Charge of State Hqrs 2ry

Dated

Despatched 15.3.05

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General No. 5532 / Gm 270-08-2

No.

Enclosure No. R10

Has the honor to forward Rs 10 (ten only) being the application fee for filing a specification in respect of an invention for "Improvements in Typographical Composing machines" received on 13.3.05 from Messrs Remfry and Son, Solicitors

Send patent Agents of Calcutta
on behalf of Linotype and
Machinery limited, Line
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To The Superintendent of Stamps in Mysore

Dated

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Enclosure No. 2 dft, 2-010

has the honor to forward here with an assignment deed and a power of attorney received on 13.3.2009 from Messrs Remfry and Son in connection with the publication of Linotype and machinery limited Linotype and printing

Machinery Manufacturers
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Enclosure No. 1

Has the honor to forward for report under Sec 6(2) of the Mysore Inventions & Designs Regn, a Specification in respect of an invention for "Improvements in Typographical Composing machines" received from Lindtype and machinery limited

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20.3.07 State Huzur Treasy.

Copy.

N.B. The original is ~~Debit~~ Serial 6 in Gm 269-08-07.

D4030 G.M. 2700 of 1906-07
S.C.

From

K. Krishna Iyer Esqr

Superintendent of Stamps

in Mysore, Bangalore

To.

The Secretary to the Government of

His Highness the Maharaja of Mysore

General & Revenue departments

Dated the 20th March 1909

General D 495.

Sir,

I have the honor to return herewith duly stamped the two assignment deeds and the two powers of attorney received with your Revs G 5319/G M 270-8-3 and G 5323/G M 2708-3 dated the 9th March 1909 and to request the favour of an acknowledgment

I have the honor to be

Sir

Your most obedient Servant.

(Copy)

(Sd) K. Krishna Iyer

Superintendent of Stamps

in Mysore

N.B. For original see serial 7 in G.M. 269 of 08-09

G. M. 270 of 1908-09
81 7.

No. 812

OFFICE OF THE SUPERINTENDENT,
GOVERNMENT PRESS,

Dated Bangalore, 20" March 09

D. 4031

FROM

~~C. H. YATES, Esq.~~,
The Superintendent, Government Press,
Bangalore.

To

K. S. CHANDRASEKHARA AIYAR, Esq., B.A., B.L.,
Secretary to the Government of H. H. the Maharaja of Mysore,
Gen. & Rev. Depts.

SIR,

With reference to your docket No. G 5324, dated 19th Instant, forwarding G. M. 270-08-4 for report a specification in respect of an application for "Improvements in Typographical Composing Machines" received from Linotype and Machinery limited, London, I have the honor to request that the application of Mr: Arthur Hungford Pollen on the same subject, which was returned with this office letter No. 235, dated 8th/10th September last

46

may be kindly caused to be sent to this office for reference and return, when done with.

I have the honor to be,

Sir,

Your most obedient Servant,

[signature]

For Superintendent,

Government Press

4031

G.R.S. 29A]

57

190

From

Secy. to the Govt. of His Highness the Maharaja of Mysore, Genl. and Rev. Dept.

To

The Supdt. of Govt press

Dated 2.4.09 Bangalore

Despatched

Received 5683

General No.

No. G.m. 270 of 08-8.

Enclosure No. 1

With reference to his letter no 812 dated the 20th march 1909 requesting that the application of Mr. Arthur Hungerford Pollen for leave to file a Specification in respect of an invention for "Typographical Composing machines" may be sent to this office for reference, has the honor to forward the application asked for and to request that the same

Copied 1/4.

MGCPB—20,000—16-2-05

A

may be returned to this Office

~~as soon as it is~~ when done with

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For Secty

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GOVERNMENT OF MYSORE

General Department.

Register No. 15 of 190 8-09 — 96852 — Sm 270-08-10

Bangalore, the 2nd June 190 9

WHEREAS an application, dated the 9th march 1909 and received on the 13th march 1909 has been submitted under Section 5 of the Mysore Inventions and Designs Regulation, 1894, by ~~Linotype~~ Linotype and machinery Limited, ~~Linotype~~ Linotype and Printing machinery manufacturers, of 188 and 189 Fleet Street, London, England. (hereinafter referred to as "the applicant") for leave to file a specification of an invention for "Improvements in Typographical Composing machines."

And whereas the applicant has duly complied with all the requirements of Section 5 of the said Regulation;

The Government of Mysore are pleased, under Section 6 of the said Regulation, to authorize the applicant to file a specification of the said invention in accordance with the provisions of the said Regulation.

ORDERED, that the applicant be, and he is hereby, informed accordingly.

By Order of the Government of Mysore,

for Secretary to the Govt. of Mysore,
Gen. and Rev. Depts.

Certified that the fees prescribed in the fourth schedule to the Mysore Inventions and Designs Regulation, 1894, in respect of the application for leave to file the said specification and of the filing thereof have been paid by the applicant, and that the specification hereinbefore described has been duly filed in accordance with the provisions of Section 8 of the said Regulation on this the 30th November 09 ~~day of 190~~.

Secretary to the Govt. of Mysore,
Gen. and Rev. Depts.

60

(Section 8 of the Inventions and Designs Regulation, 1894.)

8. (1) If within six months from the date of an order under Section 6, Sub-Section (1), or within such further time, not exceeding three months, as the Government of Mysore, in its discretion, may, on cause shown to its satisfaction and on payment of the fee prescribed in that behalf in the fourth schedule, see fit to allow, the applicant causes a specification of his invention to be filed in manner by this Part required, and the fee prescribed in the fourth schedule in respect of the filing of the specification to be paid, the applicant shall, subject to the other provisions of this Part, be entitled to the exclusive privilege of making, selling and using the invention in the Territories of Mysore, and of authorizing others so to do, for a term of fourteen years from the date of the filing of the specification.

(2) But an exclusive privilege in respect of an invention of a new manufacture shall, notwithstanding anything in Sub-Section (1), cease, if the inventor fails to pay, within the time limited in that behalf by the fourth schedule, any fee prescribed in that schedule in respect of the continuance of the privilege.

(3) If, nevertheless, in any case, by accident, mistake, or inadvertence, an inventor fails to pay any such fee within the time so limited, he may apply to the Government of Mysore for an enlargement of the time for making the payment.

(4) Thereupon the Government of Mysore may enlarge the time accordingly, on payment of the fee prescribed in that behalf in the fourth schedule, and subject to the following conditions, namely :—

(*a*) the time for making a payment shall not in any case be enlarged for more than three months ; and

(*b*) if any suit is instituted in respect of an infringement of the exclusive privilege committed after a failure to make a payment within the time limited for the making thereof and before the enlargement of that time, the Court disposing of the suit may, if it thinks fit, refuse to award or give any damages in respect of the infringement.

GPB—500—7-4-09.

61

G.R.S. 26]

Gm File No. 2708
Serial No.//

Diary No. of letter replied to 4334

No. 96853.

General and Revenue Secretariat
( )
, *the* 190

To
Messrs Remfry and Son
Solicitors and Patent Agents
Calcutta

Date of issue 2.6.09

Signed by Asst. G. D'Souza.

Gentlemen,

With reference to your letter dated the 9th march 09 forwarding an application of Linotype and Machinery Ld, Linotype and Printing Machinery manufacturers, of 188 and 189 Fleet Street London, England, for leave to file a specification in respect of an invention for "Improvements in Typographical Composing Machines", I am directed to forward herewith

ver.

SUBJECT.

In order no 96852
8m270-08-10
dated 2nd June 09
issued in the name of the
Applicants and to
request that the same
may be communicated
to the party concerned
and an acknowledgment
sent to this office

I have &c

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bus.
28/5

bearing the Invention
Register No 15 of 1908-09.

List of enclosures

Copied by 31/5

Examined by

MGCPB—30,000—16-2-05

Copy

Money Order Coupon
for Rs 60/-
remitted by Messrs Rempfry & Son
for
Specification filing fees
~~Lyons~~ Linotype & Machinery 13 & 15
of 1908-09

Note The original is with Inventor
No 13 of 1908-09

V 5927/11/09 265

$ 2166

G.M. 270 of 1908-09 se 12

64

To

MYSORE,

THE SECRETARY TO THE GOVERNMENT OF ~~INDIA,~~
Genl. & Rev. Departments,
~~DEPARTMENT OF REVENUE AND AGRICULTURE (PATENTS)~~.
Bangalore, Mysore.

From

REMFRY & SON,

Solicitors and Patent Agents,

CALCUTTA.

U.K. 18579/07.

Dated Calcutta, 26th Novr 09

Sir,

Pursuant to the Order No. G.6852/G.M.270-08-10. dated 2nd June 1909 (Register No. 15 of 1908-09) we have the honour to forward under separate cover four copies of the Specification of LINOTYPE AND MACHINERY LIMITED Linotype and Printing Machinery Manufacturers of 188 and 189 Fleet Street, London, England, for "IMPROVEMENTS IN TYPOGRAPHICAL COMPOSING MACHINES".

The prescribed fee of ~~Rs~~ 30/- is sent by Post Office Order.

The said Order is enclosed herewith and we solicit the favour of your altering the name "Leinotype" to "Linotype" and the occupation "Leinotype" to "Linotype". Kindly also fill in the actual date on which the Specifications are filed (presumably 29th November) at the foot of the Certificate, sign the Certificate, and enter our Office in Calcutta as the address for service under the Act.

We have the honour to be,

Sir,

Your very obedient servants,

REMFRY & SON.

per

ab

G.3155

No. G. M. 270-08-13

MYSORE GOVT, GEN. & REV. SECRETARIAT,

Dated Bangalore, 10 12 1905.

NOTIFICATION.

(PATENT.)

The following specification of an invention has been filed in accordance with Sections 8, 9, 10 and 11 of Regulation XI of 1894 (The Inventions and Designs Regulations) and is open to inspection at the Mysore Government Secretariat on application to the Secretary to the Government of His Highness the Maharaja of Mysore, General and Revenue Departments, and on payment of a fee of one Rupee.

By Linotype and Machinery Limited, Linotype and Printing Machinery Manufacturers, of 188 & 189, Fleet Street, London, England.

"Improvements in Typographical Composing Machines"

By Order,

for Secretary.

To

The Compiler, *Mysore Gazette*, for publication.

Draft 1/12/09

4 of 6

16

G. 3156 Encl. 2

No. G-M-270-08-14

MYSORE GOVT. GEN. & REV. SECRETARIAT,

Dated Bangalore, 10 - 12 - 1905

From

The Secretary to the Government of H. H. the Maharaja of Mysore,
General and Revenue Departments.

To

Messrs Remfry & Son
Solicitors and Patent Agents,
Calcutta

Sir,

With reference to your letter dated 26 - 11 - 1905 I am directed for communication to the parties to forward copy of a Notification No. G. 3155 dated 10 - 12 - 05 issued by this Government in regard to the invention filed by you under Regulation XI of 1894 (The Inventions and Designs Regulations.)

The order granting permission to file specification is herewith returned, with the certificate at foot, duly filled in and signed.

I have the honor to be,
Sir,
Your most obedient servant,

for Secretary.

Draft
1/12/05

7/12

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G.R.S. 29A]

190

From

Secy. to the Govt. of His Highness The Maharaja of Mysore, Genl. and Rev. Dept.

To

The Officer in Charge of the State Huzur Treasury

Dated

Despatched 10.12 09

Received

General No. G.3160

No. G.M.270-08-16

ENCLOSURE No. with Rupees Thirty

Has the honor herewith to remit rupees thirty only (Rs30/-) being the fee paid by the Linotype and Machinery Limited London for filing the specification for an invention for "Improvements in Typographic Composing Machines" and to request the favor of an acknowledgment.

~~thereof~~

B. O

for Secretary

VS.

Draft 1/12/09

1/12

GPB—10,000—9-4-06.

D 2325

G.M. 270 of 1908-09
SC 17

1909-10

From G. A. Krumbiegel, Esq.,
Superintendent,
Mysore Government Museum,
Bangalore.

To C. S. Balasundaram Iyer, Esq., B.A.,
Offg. Secretary to the Government of
H.H. the Maharaja of Mysore,
General and Revenue Departments,
Bangalore.

Dated 13th December 1909
Despatched
Received

General No. 94.
No.

Enclosure No.

Acknowledging the receipt of a Copy of the Specification filed by the Linotype and Machinery Ltd., London, of their Invention for "Improvements in Typographical Machines."

GPB—500—20-2-07

Mysore Government Museum,
Bangalore, 13th December 1909.

From G. A. Krumbiegel, Esq.,
Superintendent,
Mysore Government Museum,
Bangalore.

To C. S. Balasundaram Ayer, Esq., B.A.,
Offg. Secretary to the Government of H. H. the Maharaja
of Mysore, General & Revenue Departments, Bangalore.

Sir,

I have the honor to acknowledge the receipt of a copy of the Specification filed by the Linotype and Machinery Limited, London, of their invention for "Improvements in Typographical Machines" forwarded with Your No. G. 3157-9 / G.M. 270-08-15 of the 10th instant.

I have the honor to be,

Sir,

Your most obedient Servant,

G. A. Krumbiegel

Superintendent,
Mysore Government Museum.

G.M. 270 of 1908-09
serial 18

V 4 6 1/2
S.V.S
1909

D 2375

MYSORE P. W. DEPARTMENT. 8

No. 9325

From

THE CHIEF ENGINEER OF MYSORE,

Bangalore.

To The Secretary to the Government of Mysore, Genl: & Rev:Depts:

Dated Bangalore, 14 th. December 1909

Despatched

Enclosure *No.*

SUBJECT.

Acknowledges the receipt of a copy of the Specification for improvements in Typographical Machine

No. 9325

MYSORE P. W. DEPARTMENT,

CENTRAL OFFICE,

Bangalore, 14 th. December *1909*

From

M.Visvesvaraya Esquire,M.I.C.E.,

Chief Engineer of Mysore,

Bangalore.

To

C.S.Balasundaram Iyer Esquire,B.A.,

Offg: Secretary to the Government

of His Highness the Maharajah of Mysore

General & Revenue Departments.

SIR,

I have the honor to acknowledge the receipt of a copy of the Specification for improvements in "Typographical Machines" filed by the Linotype and Machinery,London,forwarded with your No.G.3157-9/G.M.270-08-15 of the 10 th. instant.

I have the honor to be,

sir,

Your most obedient servant.

For Deputy Chief Engineer

of Mysore.

GPB—600—11-12-08

15. To the Chief Engineer, State Geologist & Supdt Govt Museum
No. G.3157-9 dt 10-12-05
Forwards for record in his office a copy of the specification received with Sl.-12

16. To the Officer in Charge of the State Hyderabad Treasury
No. G.3160 dt 10-12-05
Remits Rs.30/- being the fee received with Sl.

17. From the Supdt Govt Museum No. 94 dt 13/12/05
18. " " Chief Engineer " 3259 dt 14/12/05
19. " " State Geologist " 13830 dt "

} Acknowledge receipt of the Specification sent with Sl. 15 a b c